

### **REMARKS**

In response to the Office Action mailed November 28, 2005, Applicant respectfully requests reconsideration.

Claims 1-11 were previously examined. By this amendment, Applicant cancels claim 2 without prejudice or disclaimer, and amends claims 1, 6, and 9. As a result, claims 1 and 3-11 are pending for examination, of which claims 1, 6 and 9 are independent. No new matter has been added.

#### **1. Claims 1-5 Patentably Distinguish Over Callahan II**

Claim 1 stands rejected under §102(e) as being anticipated by U.S. Patent No. 6,321,379 (Callahan II). Applicant respectfully traverses this rejection.

As noted in Applicant's previous response filed September 19, 2005, the target register definitions disclosed in U.S. Patent No. 6,321,379 (Callahan II) are not included in the blocks of code read by the TRA, but rather, are inserted by the TRA. Specifically, the TRA system determines that a block includes a branch, then it executes a routine that creates a live range for the block and branch. (Figs. 7, step 708; col. 9, lines 19-20) This routine sets the *initial* location of a target register definition for the branch within the block. (Col. 11, lines 33-35; emphasis added).

Accordingly, Applicant stated that "Callahan II does not teach or suggest a method of compiling a computer program from a sequence of computer instructions including a plurality of first, set branch, instructions which each identify a target address for a branch and a plurality of associated second, effect branch instructions which each implement a branch to a target address, the method comprising, inter alia, reading said computer instructions in blocks, as recited in claim 1."

The Advisory Action (specifically the Continuation Sheet) mailed November 28, 2005 does not contest that Callahan II fails to teach reading computer instructions including set branch instructions. Rather, the Advisory Action indicates that this is not a limitation in claim 1. In essence, the Advisory Action is arguing that preamble of claim 1, which includes language concerning the inclusion of the set branch instruction, is not a limitation in the claim.

In response, Applicant has amended independent claim 1 as show above to recite, *inter alia*, “reading, in blocks, said computer instructions **including a plurality of first, set branch, instructions which each identify a target address for a branch** and a plurality of associated second, effect branch instructions which each implement a branch to a target address”. As set forth above, and uncontested in the Advisory Action, Callahan II fails to teach this limitation of claim 1.

Further, Applicant has amended claim 1 to recite, *inter alia*, “determining an ancestor node in the dominator tree to which to migrate one or more of the branch instructions based on the live range of blocks so that target registers holding target addresses in a live state are not overwritten when the computer instructions are executed.” Support for this amendment can be found in the specification, for example, on page 6, last paragraph. Callahan II simply fails to disclose this limitation. Callahan II discusses throughout techniques for locating target register definitions in a program at a location that reduces the number of target register definitions and the number of times they are executed, but does not disclose locating target register definitions at a location “so that target registers holding target addresses in a live state are not overwritten when the computer instructions are executed.”

In view of the foregoing, claim 1 patentably distinguishes over Callahan II. Accordingly, Applicant respectfully requests that the rejection of claim 1 under §102(e) be withdrawn. Claims 2-5 depend from claim 1 and are patentable for at least the same reasons. Accordingly, Applicant respectfully requests that the rejections of these claims be withdrawn.

## **2. Claims 6-8 Patentably Distinguish Over Callahan II**

Claim 6 stands rejected under §102(e) as being anticipated by Callahan II. Applicant respectfully traverses this rejection.

For reasons that should be clear from the discussion of Callahan II in Section 1 above, Callahan II does not teach or suggest all of the limitations recited in claim 6 as amended. Namely, Callahan II does not teach or suggest a method of operating a computer system to compile a computer program, the method comprising, *inter alia*, executing a dominator tree constructor function in the computer system to read, in blocks, said computer instructions **including a plurality of first, set branch, instructions which each identify a target address**

**for a branch** and a plurality of associated second, effect branch instructions which each implement a branch to a target address, as recited in claim 6.

In view of the foregoing, claim 6 patentably distinguishes over Callahan II. Accordingly, Applicant respectfully requests that the rejection of claim 6 under §102(e) be withdrawn. Claims 7 and 8 depend from claim 6 and are patentable for at least the same reasons. Accordingly, Applicant respectfully requests that the rejections of these claims be withdrawn.

3. **Claims 9-11 Patentably Distinguish Over Callahan II**

Claim 9 stands rejected under §102(e) as being anticipated by Callahan II. Applicant respectfully traverses this rejection.

For reasons that should be clear from the discussion of Callahan II in Section 1 above, Callahan II does not teach or suggest all of the limitations recited in claim 9 as amended. Namely, Callahan II does not teach or suggest a compiler for compiling a computer program from a sequence of computer instructions, comprising, inter alia, a dominator tree constructor for reading, in blocks, said computer instructions **including a plurality of first, set branch, instructions which each identify a target address for a branch** and a plurality of associated second, effect branch instructions which each implement a branch to a target address, as recited in claim 9.

In view of the foregoing, claim 9 patentably distinguishes over Callahan II. Accordingly, Applicant respectfully requests that the rejection of claim 9 under §102(e) be withdrawn. Claims 10 and 11 depend from claim 9 and are patentable for at least the same reasons. Accordingly, Applicant respectfully requests that the rejections of these claims be withdrawn.

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- 8 -

Art Unit: 2192

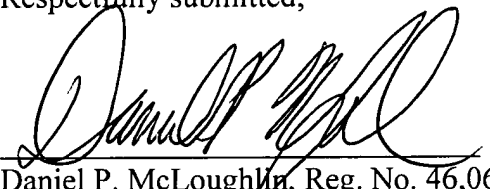
### CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,

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